Preface

Flavonoids are referred to as "nature's biological response modifiers" since they modify body's reaction to compounds such as allergens, viruses and carcinogens. A number of health promoting effects have been ascribed to the flavonoids based on in vitro and in vivo studies in both humans and experimental animals. These effects include antiallergic, antiinflammatory, anti-viral, anticancer, hypoglycemic, hypolipidemic and antioxidant properties. Recent research support the view that flavonoids in the diet are inversely associated with death from heart disease. All the above facts provoke the need for further research in this area to establish the effectiveness of flavonoids from plant kingdom.

This thesis embodies the results of investigations on flavonoids from *Garcinia cambogia* which was proved to have maximum hypolipidemic activity when a screening study was conducted with 4 different plants. Flavonoids were extracted from the dried fruit rinds of *Garcinia cambogia* and partially purified flavonoid rich fraction was used for detailed investigations.

The following parameters were investigated.

i. Screening of flavonoids from 4 different sources to assess the hypolipidemic and hypoglycemic activity.

ii. Dose response relationship of flavonoids from *G. cambogia* and assessment of toxicity by biochemical & histological studies.

iii. Detailed studies to elucidate the mechanism of hypolipidemic action with the most effective dose.

iv. *In vivo* and *in vitro* studies to elucidate the antioxidative action of flavonoids from *G. cambogia*.

v. Antiaggregatory properties of flavonoids from *G. cambogia* on human platelets.

vi. Influence of flavonoids from *G. cambogia* on haematological parameters.

vii. Role of flavonoids from *G. cambogia* on modulation of protein kinase C activity.

The results of the above studies are discussed in this thesis.